was observed. The persons present were not the only objects aimed at; the articles bombarded the whole room, particularly the mantelpiece, which was soon covered with them. Now, if these articles, in order to reach their destination, had followed a straight line, they would have encountered several obstacles, particularly vases and other fragile ornaments with which the mantelpiece was decorated. Yet not one of these articles was knocked down, nor even seemed to be touched. The articles from the cupboard came tumbling down into the midst of the other articles, avoiding all obstacles and describing horizontal curves.

"But that is not all. Having been touched several times on the forehead with a ball of stout string, I seized one end of it which was loose. The ball then moved away towards one end of the room, dividing into two, and I felt a distinct tension of the cord, sometimes continuous, sometimes in jerks, but giving me absolutely the sensation of another hand pulling in order to make me loose my hold. It will be remembered that, though the room was not brilliantly illuminated, yet the light was sufficient for the position and movements of each person to be easily distinguished.

"In addition to these singularly complex phenomena I also observed very interesting levitations of persons, of which the little girl Jane and Madame de L. were alternately the subjects.

"If when Madame de L. was seated in an ordinary chair, Jane held her hand or was in any way in contact with her, the chair left the ground and remained suspended at a height of about a yard above the floor. It then took a horizontal direction, to about the same distance, and came to rest on the table placed against the wall, which I have already mentioned. During these various movements I placed my hand on the back of the chair and felt it slowly rising, as though impelled by some elastic force. Both the chair and the person seated on it oscillated slightly during the levitation, and when the height of the table was reached the movement became rapid and unhesitating. The same phenomena were produced when Jane was seated in the chair and Madame de L. placed her hand in contact with her. It is easy to conclude from these facts, as I was afterwards convinced, that both of them possessed, in an almost equal degree, the power of mediumship.

"In order to study more closely the mechanics of levitation I placed the girl with one foot on each of my knees, and took hold of her ankles, while Madame de L., by my side, held her hand. Before long I felt the child's weight steadily diminish, until the pressure on my knees ceased to be perceptible. Then her body rose slowly, as though it was being drawn up from above. Each time I asked her what she felt at the moment, she replied that she was being lifted up as though by hands placed beneath her arms.

"Such are the facts which I witnessed at Fontenay. I will only mention that I also saw a very large number of levitations in broad daylight and full artificial light at Captain de L.'s house, when his wife was the only other person present.

"Many, I am well aware, will doubt my shrewdness, and be convinced that I have been deceived. I shall not try to convince them to the contrary, for I know that certain very well-meaning people will not admit the reality of these phenomena. I might, perhaps, do the same if I had not seen the phenomena produced under such conditions that all possibility of deception must be rigorously set aside."

* * *

Experimental Researches concerning Phantoms of the Living.

M. Durville, General Secretary of the Magnetic Society of France, recently made a very striking communication to the Society on the subject of the projection of the "double." The communication was of so unique a character that it seems hardly possible to accept without further proof the results which M. Durville says have been ascertained. The probable frauds of Jodko, to which reference was recently made in The Annals by M. de Rochas, the errors into which it is extremely probable that Dr. Bourru and Dr. Burot fell in similar experiments, show only too clearly how difficult it is to guard against fraud, generally unconscious, on the part of the subjects for experiments on externalisation of sensibility, the projection of the double, etc., and also point to the necessity of reserve in accepting as objective what may be the subjective sensations either of the subjects or those conducting the experiments. However, we cannot refuse to accept the experiences of magnetisers, which, after many denials, science has been obliged to regard as largely exact, and will probably soon accept to a still greater extent, though somewhat unwillingly. We, therefore, give particulars of these interesting experiments in the hope that others may be successful in adding confirmation where needed.

"Starting from the point at which Col.

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de Rochas and myself left the externalisation of sensibility, twelve years ago, I have found," said M. Durville, "not only that the human body is able to project a double, but that this double possesses all the faculties of the normal self with others in addition. I shall speak to-day of the power that the double of one person has of influencing the double of another at a distance.

"My first experiments were made in October last, in conjunction with M. André, a young artist and student of magnetism, upon two subjects introduced by him. I reproduce word for word the notes which I made at the end of each séance:

"Séance, October 22nd, 5 p.m. Experimenters, MM. André and Durville. Subjects, Mademoiselles Marthe and Nénette. The experiments took place in my study.

"M. André put Nénette into the magnetic sleep, and I did the same for Marthe. The doubles were disengaged in accordance with the usual procedure for each subject. After some experiments as to the perception of sound-waves, we endeavoured to ascertain if the double of the one could influence the double of the other at a distance. In order to do this M. André took Nénette into the lecture room of the society, while I remained in the study with Marthe.

"*First Experiment.*—Without my knowing what he was about to do, M. André commanded Nénette to send her double to that of Marthe and tread on her feet. Marthe quickly drew her feet back, complaining that someone was treading on them.

"*Second Experiment.*—M. André desired Nénette to send her double and strike that of Marthe a hard blow with the fist on the head. Marthe raised both hands to her breast, and, seemingly in pain, said that someone had fallen on her chest. I remarked to her that from her position it was not possible for anyone to fall on her chest, but she still persisted that she had experienced a violent blow.

"*Third Experiment.*—M. André told Nénette to send her double and vigorously pull the left leg of Marthe's double. This resulted in a powerful stretching of the limb, causing sharp pain.

"It was evident that Marthe felt very distinctly the various actions of Nénette's double on her own, except that in the second experiment she felt the blow on the chest instead of on the head, as had been commanded.

"We then desired to see whether Nénette would similarly feel the action of Marthe's double. M. André and Nénette remained in the lecture room and Marthe and I stayed in the study. Neither M. André nor Nénette knew the nature of the commands given to Marthe's double.

"*First Experiment.*—I said to Marthe: 'You felt pain a little while ago: that wretched Nénette hurt you; her double trod on your feet, struck you on the breast, and strained your leg. It is only right that you should make her suffer also. You are willing, are you not?' On her replying in the affirmative, I added: 'Very well, then, send your double to Nénette and pull her hair hard.' She made with her hands a series of movements as of a person pulling the hair of another, but Nénette declared that she felt nothing.

"*Second Experiment.*—I said to Marthe: 'Your double will go and pull hard the leg of the double of Nénette.' Nénette felt a twitching throughout her body.

"*Third Experiment.*—I said to Marthe: 'You are not putting forth sufficient energy; Nénette has not felt anything; you must put more strength into your actions. She has her arms bare; now let your double go and pinch her right arm.' Nénette complained that someone had scratched her right arm.

"Marthe now showed signs of fatigue, and we decided to awaken both subjects, when a surprise awaited us. Even before she had become fully conscious, Marthe complained of a pain in her left leg, 'As though someone had pulled it very hard,' she said; and Nénette said that her right arm had been scratched and was very painful and felt as if it was bleeding. While she was saying this she rubbed her arm with her left hand. When both subjects were fully awake, Marthe, who was still seated, continued to complain of pain in her left leg. I took hold of her hands to help her to rise; for a moment or so she stood up, but was unable to remain standing, and fell back on the chair. Nénette continued to rub her right arm, and, seemingly in pain, said: 'My arm certainly is bleeding, someone has scratched it.' I lifted up the sleeve of her garment: the arm certainly was red, probably because she had rubbed it, but there was no trace of any scratch.

"We put the subjects to sleep again and willed that these impressions should disappear. When they were again awakened they were quite well, both physically and mentally, and showed not the least sign of fatigue. The day following, however, Nénette complained that her right arm felt as though it had been sharply scratched by someone's finger-nails."

WHEN THE DOUBLE IS PROJECTED UNDER MAGNETIC INFLUENCE ALL IMPRESSIONS ARE RECEIVED BY THE DOUBLE AND TRANSFORMED BY IT INTO SENSATION.

In continuance of his researches M. Dur-

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ville, under this title, has made the following communication :—

" We admit that the human being is composed of two distinct parts, body and soul. Experiments have demonstrated by evidence that the body is controlled by a force, a superior principle, and that it is possible, as we have already seen, to isolate the one from the other for the purpose of separate study.

" Therefore, on submitting a highly sensitive person to vigorous and prolonged magnetic action, it will soon be observed that when the sleep is sufficiently profound there is an externalisation of the self, in all directions, in the form of sensitive layers, which soon condense to the right and to the left and form the phantom, or the double of the subject. This phantom, which forms to the left of the subject, remains there for a greater or less period, almost always in the same attitude at a distance of about two feet, but it can also move about and even go to a distance.

" The constituent parts of this double escape under the form of emanations from all parts of the body of the subject, but chiefly from the forehead, the top of the head, the throat, the epigastric region, and the spleen. In their formation, in the earlier stages of the experiments, they cause a more or less disagreeable sensation, amounting in some instances to pain. The subject sometimes complains of pain in the head, as happened in the instances of Edmée and Madame François; others experience an itching sensation in the throat, causing them to cough, though not suffering from chill, as was the case with Léontine and also with Edmée. These disagreeable sensations quickly pass away, and at the end of the séance the subject always feels entirely well.

" After the double is properly condensed it assumes exactly the form of the subject, and appears to the latter as more or less luminous. Some sensitives, whom I regard as the best, see it as blue to the right; yellow, orange or red to the left; others only see a more or less distinct glimmer of white light. In perfect darkness highly sensitive persons, without being asleep, see it very distinctly with the colours I have mentioned. Ordinary sensitives only see a white light, more or less bright. Those partially sensitive perceive it in an undefined form, generally that of a bust, or rather of a dressmaker's dummy, which seems as though formed of mist or greyish vapour.

" The double is connected with the physical body by a cord of the thickness of the little finger, which nearly always runs from the navel of the physical body to the corresponding point in the double. There are exceptions : Mme. François is connected to her double by a cord issuing from the top of the head, almost at the cerebro-spinal centre and terminating at the corresponding point in the double. There are even a few subjects who say that this cord starts from the epigastric region, in front of the stomach, and even from the spleen—that is to say, on the same level but more to the left.

" In most subjects this cord, which is not everywhere of the same thickness, forms in places swellings like ganglia, which apparently nourish the cord when the double is projected. In all subjects this cord is the seat of a very intense luminous circulation, and to sensitives it presents the aspect of a mixed nerve, the luminous fluid circulating from the subject to the double in the one part, and from the double to the subject in the other portion.

" The physical senses are completely inhibited; the subject sees nothing with her eyes, hears nothing with her ears, nor perceives any smell with the olfactory sense, and has no feeling of contact. All these impressions appear to be perceived by distinct senses located in the double.

" In all subjects the double is the complete individual, and the physical body as nothing. 'The double is myself,' said Léontine, ' the body is only an empty bag.'

" This was very picturesquely described by Edmée. Replying to a question which I put, she said : 'The body which you touch is nothing; it is an envelope of the other. My whole being is in the luminous form. It is that which thinks, knows and acts. It transmits to the physical body all that I tell you.'

" ' What are we to call that luminous personality ? ' I asked.

" ' There is no need to call it anything; it is Edmée—it is myself; if you wish to call it anything, call it Edmée.'

" ' We must, however, have some means of distinguishing the one from the other,' I replied. 'Are you willing that we should agree to call the astral body the double, since it *is* your double ? '

" ' Oh, no, not astral ! Call it, if you wish, the double; it is not my double, however—it is myself.'

" Questioned on this subject in another séance, she again declared that the physical body feels nothing, sees nothing, and that all impressions are transmitted to it by the double, through the cord which connects them.

" ' When the double is touched,' she said, ' the impression of contact comes as a shock to the physical brain, and the sensation strikes upon it. When we talk, it seems as though my physical body hears, because it replies; but that is not the case. It hears nothing; that which hears is the double. The question and the reply are transmitted along the cord to the physical brain as by a movement, by something which vibrates. It is also the double which sees, and the sight is conveyed to the physical body by a movement, as though the physical brain were caused to vibrate by electricity, and then it sees what the double has seen. All the impressions received by the double are transmitted to the senses of the brain, but these centres perceive nothing of themselves.'

"It is, however, very easy to verify all these affirmatives by direct experiment. I will describe a series of experiments relating to the various senses:—

TOUCH.

"We know that nearly all subjects in the magnetic sleep are insensible; but we do not know whither the sensibility has transferred itself. When the subject is externalised, the sensibility always radiates around the body, at a little distance from it; and if we pinch, burn or prick the sensitive zones, the subject feels sharp pain, though she feels nothing when we prick the body. It is the same in the projection of the double. The subject feels neither pricks nor pinches on the physical body; but she experiences a disagreeable and even painful sensation as soon as we touch the double or the connecting cord. This phenomenon has been verified at all the séances and with all the subjects without exception. It is unnecessary to demonstrate this phenomenon by quoting these experiments.

SIGHT.

"M. André and I tried the following experiment with Marthe, which has been verified many times by M. André himself:—A paper with large letters printed on it was placed before the half-open eyes of the subject, who declared that she could see nothing. The paper was then placed before different parts of the body by which the somnambulistic subjects sometimes see: the top of the head, the nape of the neck, or the epigastrium; the subject again declared that she could see nothing. The paper was placed before the eyes of the double, but it could see nothing, nor yet at the top of the head; but at the nape of the neck it could read without hesitation.

"The projected double can see, but rather confusedly, from one room into another. While I was at the end of my study with Edmée, whose double was projected, I asked three of the witnesses of the experiment—Mme. Stahl, Mme. Fournier, and M. Bonnet—to go into the lecture room of the society and perform some simple and easily-described movements, so that we could ascertain whether the double, which I would send there, could see anything. Dr. Pau de Saint-Martin stood near the window, between my study and the hall where the witnesses were, in order to see almost at the same time both the subject and what these experimenters were doing.

"*First Experiment.* — Mme. Fournier seated herself on the table. 'I see,' said the subject, 'Mme. Fournier seated on the table.'

"*Second Experiment.*—The three persons walked into the room and gesticulated. 'They walk and make gestures with their hands; I do not know what it means.'

"*Third Experiment.*—Mme. Stahl took a pamphlet from the table and handed it to Mme. Fournier. 'The two ladies are reading,' said the subject.

"*Fourth Experiment.*—The three persons joined hands, formed a chain and walked round the table. 'How funny!' said the subject; 'they are dancing round the table like three lunatics.'

"When I come to speak of lucidity I shall have many very remarkable visual facts to relate. At present I shall only give you a few facts relative to audition and olfaction.

HEARING.

"Marthe's double being projected, I placed my watch at the place corresponding to the left ear of the double. Marthe heard the ticking very distinctly. I placed the watch on the nape of the neck, on the epigastrium at the feet of the double; the subject still heard. I then placed the watch successively on the external orifices of the subject's ears, on the nape of her neck, on the epigastrium, and on her feet; she heard absolutely nothing. The experiment was repeated many times with the same subject, under different conditions, but always with the same results.

"Edmée's double hears very distinctly the ticking of the watch, but she hears absolutely nothing when it is placed on the physical ears. I wished to ascertain whether she could hear, from one room to another, the words of a person uttered in a low voice. For this purpose I placed a chair in the middle of the lecture room, and asked Mme. Stahl to come close to this chair, to which, from the end of my study, I would send Edmée's double, to find out whether the double would hear her speak. Mme. Fournier was stationed by the window, between the two rooms, so that she could see Mme. Stahl and the subject almost at the same time. I sent Edmée's double to sit on the chair beside Mme. Stahl and told it to listen attentively to hear if she spoke to it. The double was on the chair. Mme. Stahl drew near to the chair, stooped and spoke in a low voice.

"Edmée at first complained that Mme. Stahl had touched her, which was disagreeable to her; she heard her speak, but she changed her place, and this unnerved her and she could not understand what was said. I asked her to give her attention to what was said by Mme. Stahl. 'She gives me advice,' she said; 'she tells me to be calm and less nervous.'

"Mme. Stahl told us that she had said to the double: 'I am here; can you hear me? Do not be nervous, be calm.' These words were uttered in so low a tone that Madame Fournier, seven feet away, had not heard a single word.

"The double of Léontine heard distinctly the ticking of a watch, and the physical body, notwithstanding suggestions, heard nothing.

"I passed my watch to Dr. Pau de Saint-Martin and, unknown to the subject, I asked him to ascertain whether it was the double or the physical body that heard the ticking of the watch. The doctor cautiously approached the physical body and placed the watch close to the ears, but without touching them. The subject said nothing. The doctor drew her attention and said that he was holding a watch to her ear, and that she certainly ought to hear it. The subject declared that she could hear nothing. A few moments afterwards the doctor brought the watch close to the left ear of the double. The subject immediately declared that she could hear the ticking of a watch.

"In order to more fully verify the fact that the physical body heard nothing, I asked the doctor to hand me back my watch, and opened the mouth of the subject. I inserted the ring of the watch, and asked the subject to close her teeth and to listen attentively. I then asked the subject to open her mouth, and withdrew the watch. She had seen the watch but had heard nothing.

"The experiments on hearing were frequently repeated with all the subjects under very various conditions, and surrounded by all possible precautions, but have always given the same results with all the subjects.

SMELL.

"Without Edmée knowing it, Dr. Pau de Saint-Martin put an uncorked bottle of ammonia under her nose, and kept it there for about a minute, but the subject perceived nothing. A few moments later he put the same bottle in front of the face of the double. 'Oh!' she cried, turning round, 'it is a bottle, and it smells bad.' He withdrew the bottle noiselessly and put in its place a bottle containing essence of bergamot. 'That smells better,' said the subject at the same moment.

"The same experiment was tried with Léontine, and gave even more decided results. Dr. Pau de Saint-Martin put the bottle of ammonia under the nose of the double. In a moment the subject seized her nose with her right hand, and turned away making a grimace. 'It is sedative water,' she said; then added, 'no, it is ammonia.'

After five or six minutes, and without the subject suspecting it, the doctor placed the bottle of ammonia under the nose of the physical body. The subject said nothing and did not appear to perceive any unpleasant odour. On being questioned as to whether she smelt anything, either agreeable or otherwise, she declared that she smelt absolutely nothing. The doctor tried to find out whether suggestion might not, in spite of all appearances, play some part in these manifestations. 'It was ammonia,' he said 'that I was holding under your nose a moment ago; you ought not only to smell it, but the odour should be very disagreeable.' The subject, as though vexed that she was not believed, replied sharply, 'I tell you that I smell nothing; I don't care whether you believe me or not.'

"The doctor withdrew, and a few moments later he gently advanced towards the double with the bottle of bergamot, which he held out towards the place occupied by the head of the double. 'I see,' said the subject, 'that you are holding a bottle to my ear; you want to make me smell something'; and she added, with a malicious smile, 'but I do not smell with my ear.' The doctor then placed the bottle in front of the place occupied by the nose, and the subject immediately declared that she smelt an agreeable odour. 'That is better than the ammonia,' she added.

"The same experiments were tried with Mme. Vix, and gave similar results. The subject perceived nothing, and the double smelt ammonia very distinctly. On presenting to the nose of the double some essence of bergamot, the subject said that the odour was not the same, that it was less disagreeable, but that she did not like it. On being questioned after the séance, she declared that she did not like the odour of violets, of bergamot, or of patchouli.

TASTE.

"In order to render intelligible the description of a series of experiments of this nature I am obliged to transcribe *verbatim* the notes which I made after each séance.

"Subject of the experiments, Mme. Léontine; witnesses, MM. Combe, Dubois and G. Durville. We were in a dim light.

"I projected the double in the usual manner, and proposed to ascertain whether it was the subject or the double that perceived savours. In order to do this I had arranged two armchairs in my study, in front of a long table—one chair for the subject, the other for the double—in such a way that when the subject leaned forward she could place her forearms on the table without inconvenience. As the double naturally assumes the attitude of the subject, it would also rest its forearms on the table. A pile of books was placed on the table in front of the double, in the space betweeen its arms. This pile was as high as the double's chin, so as to serve as a mark for the position of its mouth.

"The double being on the left of the subject, in the place prepared for it, when the condensation appeared sufficient, I requested the subject to lean forward and place her forearms on the table, as I have just described, and I asked the double to assume the same position.

"The subject was not informed of the nature of the substances to be used in the experiment. These substances had very little smell and were intended to affect only the sense of taste.

"I.—I placed a morsel of aloes in the subject's hand, and asked her to put it into her mouth, to chew it, and tell us whether it tasted good or bad. She chewed the morsel and declared that it had no taste. To avoid any purgative action I told her to spit it out.

"II.—I put a small piece of sugar into her hand, and asked her to chew it and tell us how it tasted. The reply was the same as before.

"III.—By means of forceps I took a chip of quassia and put it towards the lower part of the face of the double, at the place where I supposed the mouth to be. I asked the double to open its mouth and take into it what I presented to it, then to close it so as to perceive the taste. 'It is not good,' the subject immediately said; 'it is bitter.' I withdrew the forceps and chip cautiously, put the chip into the subject's hand and asked her to put it in her mouth and taste it. She did so, and declared that she tasted nothing: 'It has no taste,' she added.

"IV.—I took a morsel of aloes with the forceps and put it towards the mouth of the double, with the same request. 'I know what that is,' said the subject; 'but it is not good, it is bitter.' After withdrawing the morsel of aloes I put it into the subject's mouth and asked her to suck it. She did so, and said she tasted nothing.

"V.—I put a few drops of sulphate of quinine into a small spoon and placed it near the mouth of the double, with the same request. 'It is not good,' was the answer; 'it is bitter.'

"VI.—I put a pinch of nux vomica into a small spoon with a few drops of water, and proceeded as in the last experiment. 'It is nasty,' said the subject; 'it is bitter, it is harsh to the tongue.'

"VII.—With a forceps I took a piece of an orange and put it towards the mouth of the double, with request as before. 'That is good,' said the subject; 'it is orange.' I withdrew the piece of orange and placed it in the subject's mouth, asking her to tell us what it was. 'I don't know at all,' she answered; 'just now you made me taste orange, but now I taste nothing.'

"VIII.—I put a pinch of salt into a small spoon and brought it to the mouth of the double, with the usual request. 'That's salt,' said the subject.

"IX.—I took a lump of sugar with the forceps and put it to the mouth of the double, with the same request. 'Oh, that's sugar,' said the subject. I withdrew it and laid it on the table. After a few moments, wishing to see whether, in spite of all appearances, suggestion did not enter into the production of the phenomena, I took it up again, and put it into the subject's mouth for her to chew, telling her it was a piece of aloes. She chewed it, and I told her it was nasty, and she ought certainly to find it so. 'I don't care if it is nasty,' she answered; 'I cannot taste it at all.'

"The witnesses of this last series of experiments are thoroughly convinced that the physical body perceives no taste by itself; that it is the double which perceives, transforms into sensations and transmits them to the body.

HOW THE PRESENCE AND POSITION OF THE PHANTOM CAN BE PROVED.

"I have said that sensitive persons see the phantom better in proportion as their sensitiveness is greater and more practised; but sensitives are very rare, and most of those who were present at my experiments saw nothing, except sometimes lights which appeared and disappeared. Such persons would always be in doubt as to the presence of the phantom and the position which it really occupied, if there had not been, in addition to touch, sound, and odours, certain other means of verification, the two principal of which are: (1) sensations felt by the witnesses when the phantom approaches them; (2) the action of the phantom on phosphorescent screens.

"I.—When the phantom approaches the spectators, nine out of ten of them become aware of its presence by a feeling of coolness

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which comes over them and which disappears soon after it has gone away again. Some perceive distinctly a sort of breath, which somewhat resembles that felt when standing near an electrostatic machine in operation. When the phantom has stood for six or eight minutes near persons placed at one end of my study, it seems to them that that part of the room has become sensibly colder. There are a few persons who do not perceive this sensation of coolness, but who receive other impressions. Thus, on the approach of the phantom, especially when it has stood before him for forty or fifty seconds, M. Dubois feels a moisture in his hands, and especially at the ends of his fingers. If the phantom remains longer, this moisture spreads to the upper part of his body. Others feel a slight trembling, a sort of shivering, which is curious without being disagreeable.

"If a person approaches the phantom without touching it, and then plunges his hand into it, the hand is rapidly affected by this impression of coolness or moisture. When the hand which has remained for a few moments in the phantom is looked at in the dark it almost always appears slightly luminous, especially at the tips of the fingers.

II.—The phantom gives off N-rays in great abundance, which illuminate phosphorescent screens in a very remarkable manner.*

"I will give some details in regard to these rays for the benefit of those who are not familiar with the latest discoveries in physical science.

"At the beginning of 1903 M. Blondlot, professor of physics at the University of Nancy, while studying the X-rays, which are not refracted, observed some rays which were refrangible. He soon discovered that these rays are distinct from the X-rays, and that their principal characteristic is the power of increasing the brilliancy of a small flame. These rays are found abundantly in sunlight, in the light of an Auer burner when the mantle is new; in the human body, as Charpentier, another professor at Nancy, has shown, and in certain natural agents, as other observers have found. The Nancy professors gave to these rays the name of N-rays, from the initial of Nancy, where they were discovered.

"It has been shown by practice that the flame could be advantageously replaced by a black screen, portions of the surface of which had been covered with sulphide of calcium, and which had been exposed to a source of N-rays, preferably to sunlight. The screen thus exposed is kept in the shade, in a dry place, and when it is to be used it is placed in comparative darkness, if complete darkness cannot be obtained, and the screen becomes luminous as soon as it is placed near a secondary source of N-rays. It was with these screens that I made my experiments on the phantom. Here is the account of a séance for study:—

"I had two large screens and a number of small ones. For the experiments which I am about to relate, I took the two large screens and a small one, which I had exposed to sunlight. The following is the result of an experiment made in complete darkness. The subject was Mme. François; the witnesses were M. François and M. Sigogne, professor at the University of Brussels.

"The double of the subject having been projected, I took the three screens and showed them to the witnesses, who observed that they were completely dark. Laying the small screen aside for a moment, I placed one of the large ones on the abdomen of the subject and held the other in the phantom, which was seated on an arm-chair to the left of the subject.

"The screen placed in the phantom became rapidly illuminated, and the one on the subject remained completely dark. After several minutes I took both screens and showed them to the witnesses, who were much astonished by the phenomenon. I then took the screen which had been on the subject, and remained dark, and placed it in the phantom. It immediately became illuminated like the first. I again showed them to the witnesses, who saw that they were sufficiently illuminated to allow them easily to count the spots of sulphide of calcium at a distance of a yard.

"I then took the small screen which had not been used, and placed it on the abdomen of the subject for two or three minutes without obtaining the slightest trace of luminosity. I then placed it in the phantom, and it became very strongly illuminated. The witnesses found that it gave enough light to enable one of them to tell the time by a watch.

"These experiments, repeated about ten times with seven or eight different subjects, always gave similar results, which were very intense when the screens had been well exposed to the sun, less so when the exposure had been insufficient.

"It is as well to add here that I had previously observed the action of nearly all the subjects on the same screens when the double

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* Many researchers who do not believe in the existence of the N-rays will see in the following experiments an argument against the objective reality of the phenomena set forth by M. Durville, while others will consider that the experiments in question confirm the existence of the rays.—Editor's Note.

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was not projected. When they approached their hands to the screen in the dark, especially when they closed their fists firmly, the screen was more or less illuminated, as, in fact, is the case with anyone. But it is worthy of notice that the luminosity is always considerably less than that which is observed when the screen is placed in the phantom.

"This series of experiments with phosphorescent screens shows once more that the physical body, when the phantom is projected, is no longer the seat of any radio-activity; at all events, it does not emit N-rays, while the phantom becomes an extraordinarily powerful source of these rays.

ACTION OF THE PHANTOM ON MATTER.

"After having studied the behaviour of one phantom towards another, recognising that all the sensations of the subjects themselves are transferred to the phantoms, and how, without being sensitives themselves, all the witnesses could assure themselves of the presence of the phantom, I tried to obtain other phenomena.

"I first attempted to photograph the phantom, to obtain an impression of its hand on flour, and to get it to move a piece of paper suspended by a thread; but, except for traces of luminous action on one or two plates, traces which, however, disappeared in the course of development, I obtained absolutely nothing, although I had the patience to repeat each attempt four or five times at intervals of a week.

"I then resolved to change my method of experiment, by trying to obtain very simple effects, which the two subjects with whom I regularly experimented sometimes observed to occur spontaneously, without understanding the cause or method of their production. I refer to raps and the displacement of an object. I report the facts as I noted them after each séance.

"*Raps.*—The subject of the experiment was Mme. François, who knows nothing of spirit phenomena. M. and Mlle. Husenstein, MM. François and Dubois were present at the experiment. We were in darkness; it was 9 p.m.

"I caused the projection of the phantom, and when it appeared to be sufficiently condensed I said to the subject: 'Since we did not obtain the moving of the sheet of paper, I will leave to the phantom the choice of the action to be performed. It can do what it pleases, but I should be glad if it would strike two blows on the table.' This was a black varnished drawing-room table without a cloth, placed about a yard in front of the arm-chair occupied by the phantom, in front of me to my right, in such a way that without ceasing to touch the subject, and simply by extending my arm in that direction, I could ascertain the presence of the phantom. The witnesses were seated near my desk, about two and a-half yards from the edge of the table.

"After about twenty or thirty seconds we all heard, very distinctly, two sharp blows struck on the table. These raps resembled those produced when we strike sharply with the knuckle of the middle finger.

"Somewhat astonished at this result, I said to the phantom: 'If it is you who have struck on the table, please strike on it again.' I had scarcely uttered these words when two raps, less strong than the former ones, were again heard on the table.

"The next séance, with the same subject, at the same hour, and under the same conditions, was held in the presence of MM. Dubois and François. Profiting by what I had learnt at the two previous séances, I only tried to obtain raps. I caused the double to be projected, and when it seemed sufficiently condensed I asked it, when it could, to strike more blows on the table. After two or three minutes we heard some crackings in the table, which no one was touching, then two light blows were distinctly heard, as though struck with the tip of a finger. I asked the phantom to give two more raps. I had scarcely expressed this desire when two blows similar to the former ones were heard. I allowed the subject to rest for a few moments, then I asked the phantom to give three more raps. Crackings were heard in the table and immediately afterwards three blows similar to the former ones were distinctly heard.

"At this moment someone rang at the door. The subject became agitated, and I found that the phantom was no longer near the table, nor in the armchair placed for it on the subject's left. I asked the subject where the phantom was. 'It has gone to see who is at the door,' was the reply. I asked who it was that had come to disturb us, and if we should open the door. 'It is a man,' she said, 'who has come to see you; you can open the door.' I asked M. Dubois to go and open the door for the visitor, who was about to go away. It was Dr. Ridet, who came to bring me a manuscript. He was shown into the study where the experiments were taking place.

"The phantom had returned to the chair, but was disorganised, and the subject was enervated. I calmed her, and then tried to condense the phantom. When this appeared to be sufficiently accomplished I asked it to approach the table and give two raps. After two or three minutes, crackings were heard

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in the table, and then three raps were heard, as though struck with the fleshy part of the fingers of the open hand.

"The subject was enervated, and affected by the presence of the new witness, with whom she was not acquainted. Fearing a nervous attack, I awoke her gradually, with the usual precautions. Though somewhat fatigued, she was in good physical and mental condition.

"*Displacement of a half-opened door.*—The subject of this experiment was Mme. Léontine, who has several times observed that the door of a cupboard at her house opened and shut of itself. Let me note here that the subject has never been present at a spiritistic séance, and does not regard herself as a medium. The witnesses were Mme. X., MM. Bonnet and Dubois. We were in the dark.

"It was with the projected double of this subject that I had tried in vain, four or five times over, to obtain an impression of its hand in flour; I hoped to be more successful by trying to obtain either the closing of the lid of a box which was open on the table, or some action on the door of a book-case which I left half-open for this purpose.

"I projected the phantom, and when it appeared sufficiently condensed I said: 'Since we did not obtain any results on the flour, we will try another phenomenon. Will the phantom, at its own choice, either close the lid of the box, which is open on the table, or push the door of the book-case, which is half-open?'

"After four or five minutes we heard, very distinctly, a sound like the creaking of hinges. We lighted a candle and found that the door, which was about a foot open before the séance, was now not more than six inches open. The door had thus been moved about six inches. We moved the door backwards and forwards, and each time there was the same creaking of hinges that we had just heard. None of the witnesses had any doubt at all; it was the phantom that had produced the sound by moving the door.

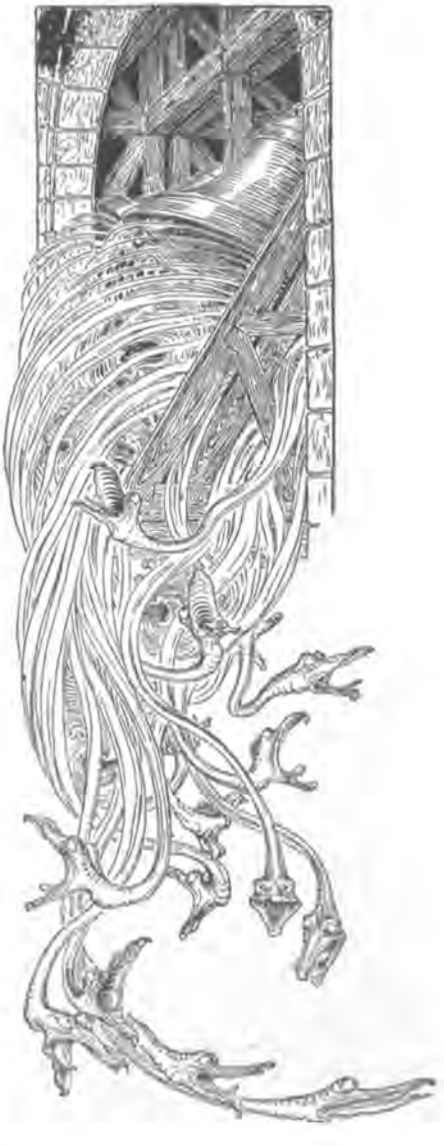
"I awoke the subject, taking the usual precautions. She was in excellent physical and mental condition."

* * *

The Art of "Fidus."

WITH reference to the study on Blake, which we published in THE ANNALS for January, our attention has been drawn to a contemporary German artist, whose manner, or, more correctly, the form of his talent, bears a close resemblance to that of the English master. We refer to "Fidus," whose name in private life is Hugo Hoppener. Recently *Les Documents du Progrès,* a new international review, which has made itself the herald of modern liberal ideas, published an article on this artist, accompanied by illustrations, which we herewith reproduce, in order that our readers may gain some idea of the originality of thought and perfection of design in his productions.

Without doubt, Fidus, equally with Blake, is a visionary in the pathological meaning of the word, but it is somewhat difficult to define the precise part played by the sub-



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